Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V (PROPOSED PERMIT) NO. V-05-041
MERITOR HEAVY VEHICLE BRAKING SYSTEMS (USA), INC.
CARROLLTON KY 41008
NOVEMBER 10, 2006
MIN WANG, REVIEWER

SOURCE I.D. #:	021-0041-00026
SOURCE A.I. #:	710
ACTIVITY #:	APE20040002

SOURCE DESCRIPTION:

Meritor Heavy Vehicle Braking Systems (USA), Inc. consists of a 12 tph ductile/gray iron, green sand foundry, a machining and assembly center, and a residual waste landfill.

The principal operations at the foundry (Carrollton Casting Center, CCC) include a furnace, charging, melting, ductile iron inoculation, green sand molding, iron pouring, mold cooling, mold shakeout, casting, cleaning, finishing, green sand processing, and core making (cold box). The adjacent Carrollton Machine Center (CMC) includes painting operations that are also regulated sources of air pollution.

The source elects to take a 70,000 tpy operation limit on iron processed in order to preclude major source status for HAPs, and is therefore Conditional Major with respect to HAPs. With this operation limitation the source is exempt from 40 CFR 63 Subpart MMMM and EEEEE.

The source also elects to have a combined paint booth VOCs emission limit of 103 tpy to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration (PSD), and is therefore Synthetic Minor with respect to VOCs.

PUBLIC AND U.S. EPA REVIEW:

Public notice was placed in the Carrollton News Democrat on October 11, 2006. The comment period ended on November 10, 2006. There were only four comments received from Meritor on November 3, 2006. The Division's response to comments is discussed below. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. Please see Response to Comments for a detailed explanation of the changes made to the permit. The U.S. EPA has 45 days to comment on this proposed permit.

Response to Comments:

Company Comment #1:
Section B, Group 3 Requirements, Condition 7(a), Page 7 of 28. Please re-designate the "4 Bagger Wheelabrator Dust Collector" as the "4 Bagger Dust Collector."

Response:
The Division has revised the permit as requested by the source.

Company Comment #2:
Section B, Group 3 Requirements, Condition 7(a), Page 7 of 28. Please clarify the requirement that the control devices "shall be functional at all time of operation" to "shall be operational at all times the emission units associated with the control devices are in operation."

Response:
The Division has revised the permit as requested by the source. The language "shall be functional at all time of operation" has been changed to "shall be operated at all times when the associated emission units are in operation."

Company Comment #3:
Section B, Miscellaneous Operations (non-fugitive), all Conditions, Pages 12-13 of 28. Please move the Bond Silo (EP16) to the Insignificant Activity list in Section C. With an approximate air flow of only 600 cfm, and assuming a control device exit grain loading of 0.02 gr/cf, the particulate potential to emit of this unit is only 0.10 lb/hr and 0.45 ton/yr. The Bond Silo (EP16) operation and potential to emit is very similar to a number of other units included on the Insignificant Activity list in Section C. including the New Sand Hopper (EP 18), the New Sand Silo (EP17), and the Core Sand Hopper (EP27) to name a few.

Response:
The Division has revised the permit as requested by the source. Since the control device for the Bond Silo can be considered as part of the equipment physically, and the bond purchased by facility is a valuable goods, the potential to emit of PM from this process is considered after the control device, which is less than 5 tpy.

Company Comment #4:
Section D, Condition 1-4, Page 17 of 28. Please add a short term furnace limit of 12 tons per hour of iron to the existing 70,000 tons per year long term limit. The compliance demonstration procedure for this limit will track daily iron charges to the furnaces and calculate hourly production values on a 24 hour average basis.

Response:
The Division has revised the permit as requested by the source. The following language has been added to Section D(2):

The total raw materials charged to two induced furnaces (EP# 2) shall not exceed 12 tons per hour (self-imposed limit, two furnaces are considered as a group).

Compliance Demonstration:

The permittee shall monitor and keep records of the types, total weight of raw material charged to the two furnaces and total operational hours of the two furnaces daily. The hourly charge rate shall be based on a 24-hour average basis.

COMMENTS:

Type of controls and efficiencies:

Control Device	Applicable Points	Rated Efficiency
Four Bagger Baghouse (EP1_S53)	Scrap & Charge Handling (08)	98%
	Top Fired Preheaters (01)	
	Induction Furnaces (02)	
	Inoculation (09)	
Two Bagger Baghouse (EP6_S54)	Return Sand Handling (06)	95%
	Return Sand Bucket Elevator, Sifter, and Return Sand Hopper and Oversize Belt and Hopper (22)	
	Core Sand and Binder Mixer (05)	
Stack for Pangborn Dust Collector (EP4_S55)	Shot Blast (04)	95%
	Grinding (15)	
Schneible Wet Collector (EP12-S56) #1	Aisco Sakeout Drum (14)	95%
	Mold Machine (20)	
Flex Kleen Collector	Green Sand Molder (26)	98%
High Eff Wet Scrubber	Mold Machine (20)	95%
Schneible Wet Collector #2	Mold Making (Mold Pattern Release Agent) (19)	95%
Vacuum Filter	Mold Evacuation (21)	98%
Wet Collector	Core Machines 1 & 2 (31 & 32)	98%
Exhaust Filters	Paint lines (50 & 62-69)	90%
Flex-Kleen Bin Vent	New Bond Silo (16)	95%

EMISSION FACTORS AND THEIR SOURCES:

The emission factors and their sources can be found in the application document "Emission Calculations" and in the POC table. Because there are over 150 emission points for this source, an inclusive Emission Factor table has not been created for the Statement of Basis.

PERIODIC MONITORING:

A. Iron Foundry Related Operations

GROUP1 REQUIREMENTS:

Melt Shop Operations

Description: Melt shop operations consisting of the following:

EP# 08 Scrap Handling/Charging
EP# 01 Scrap Pre-heater
EP# 02 Induction Furnaces (x2)
EP# 09 Inoculation

GROUP2 REQUIREMENTS:

Casting and Cooling Operations

Description: Casting and cooling operations consisting of the following:

EP# 12 Pouring Line (2 roof fans)
EP# 13 Cooling Line (3 roof fans)

GROUP3 REQUIREMENTS:

Mold Making and Sand Handling Operations

Description: Mold making and sand handling operations consisting of the following:

EP# 14 Shakeout
EP# 06 Return Sand Handling
EP# 22 Return Sand Sorting
EP# 24 Sand Conveyor to Muller
EP# 26 Green Sand Muller
EP# 03 Green Sand Storage/Conveyor
EP# 19 Mold Making (Mold Pattern Release Agent)
EP# 20 Mold Making (Mold Machine)
EP# 21 Mold Evacuation

GROUP4 REQUIREMENTS:

Core Making Operations

Description: Core making operations consisting of the following:

EP# 31 Core Machine 1
EP# 32 Core Machine 2

GROUP5 REQUIREMENTS:

Cleaning Operations

Description: Cleaning operations consisting of the following:

EP# 04 Shotblaster
EP# 15 Stand Grinders (x4)

1. **Applicable Regulations:**

For all groups except EP03 in Group 3:
401 KAR 59:010 New Process Operations
For all groups except EP19 in Group 3:
401 KAR 63:010 Fugitive Emissions

2. **Compliance Requirements:**

1) On an operating daily basis, the Permittee shall inspect the above listed emission units for

potential fugitive emissions. If there is a potential for fugitive emissions then reasonable precautions listed as follows shall be taken:

Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling.

To ensure these precautions taken by facility, surfaces that are subjected to vehicular or foot traffic shall be vacuumed, wet mopped, or otherwise maintained in accordance with a Division approved housekeeping plan. This plan shall be submitted within 60 days of issuance of the final permit.

2) To provide reasonable assurance that the visible emission limitations are being met the permittee shall:
   a) Determine the opacity of emissions during operation from each stack or vent by Reference Method 9 annually, or more frequently if requested by the Division.
   b) Perform a qualitative visual observation of the opacity of emissions from each stack/vent on a weekly basis and maintain a log of the observation. The log shall note:
      i. Whether any air emissions (except for water vapor) were visible from the vent/stack.
      ii. All emission points from which visible emissions occurred.
   c) Determine the opacity of emissions by Reference Method 9 if qualitative visible emissions from any stack/vent are seen.

B. Paint Booth Operations

Description: Paint booth operations consisting of the following:
EP# 50 Nutro Paint Booth
EP# 62 Cell 11 Paint Booth
EP# 63 MHFA A Paint Booth
EP# 64 MHFA B Paint Booth
EP# 67 Drum 1 Paint Booth
EP# 65 Drum 2 Paint Booth
EP# 68 018/222 1 Paint Booth
EP# 69 018/222 2 Paint Booth

1. **Applicable Regulations**:
401 KAR 59:010 New Process Operations
401 KAR 59:225 New Miscellaneous Metal Parts and Products Surface Coating Operations

2. **Compliance Requirements:**
1) To provide reasonable assurance that the visible emission limitations are being met the permittee shall:
   a) Determine the opacity of emissions during operation from each stack or vent by Reference Method 9 annually, or more frequently if requested by the Division.
   b) Perform a qualitative visual observation of the opacity of emissions from each stack/vent on a weekly basis and maintain a log of the observation. The log shall note:
      i. Whether any air emissions (except for water vapor) were visible from the vent/stack.
      ii. All emission points from which visible emissions occurred.
   c) Determine the opacity of emissions by Reference Method 9 if qualitative visible

emissions from any stack/vent are seen.

2) To ensure VOC content of the paint as applied shall not exceed 3.50 lbs/gallon at any paint lines, the permittee shall monitor and keep records of the type, density, and percentage of VOC(s) based on MSDS sheet of the paint used at each spray booth, including the VOC content of the paint as applied. Such data shall be recorded on an operating daily basis.

3) To provide reasonable assurance that the permittee is in compliance with the combined paint booth VOC emission limit of 103 tpy (preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration), the permittee shall calculate VOC content of the materials as applied daily.

C. Miscellaneous Operations

Description: Miscellaneous operations consisting of the following:

EP# 39 Paved Haul Roads
Unpaved Haul Roads

EP# 16 New Bond Silo

1. **Applicable Regulations**:

Points #39 and Unpaved Haul Roads
401 KAR 63:010 Fugitive Emissions

Point #16
401 KAR 59:010 **New Process Operations**

2. **Compliance Requirements:**

1) For EP#39 and Unpaved Haul Roads, on an operating daily basis, the Permittee shall inspect the above listed emission units for potential fugitive emissions. If there is a potential for fugitive emissions then reasonable precautions listed as follows shall be taken:
   a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
   b) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts; and
   c) The maintenance of paved roadways in a clean condition.

2) For EP#16, to provide reasonable assurance that the visible emission limitations are being met the permittee shall:
   a) Determine the opacity of emissions during operation from each stack or vent by Reference Method 9 annually, or more frequently if requested by the Division.
   b) Perform a qualitative visual observation of the opacity of emissions from each stack/vent on a weekly basis and maintain a log of the observation. The log shall note:
      i. Whether any air emissions (except for water vapor) were visible from the vent/stack.
      ii. All emission points from which visible emissions occurred.
   c) Determine the opacity of emissions by Reference Method 9 if qualitative visible emissions from any stack/vent are seen.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec.

51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.